

Amendments

Amendments to the Claims

Please amend the claims as shown below in the List of Claims

List of Claims

- 1-12. (Canceled)
13. (Previously Presented) A process for the production of an L-amino acid chosen from the group consisting of L-threonine, L-isoleucine, L-valine, L-methionine, L-homoserine and L-lysine comprising:
- a) fermenting a bacterium comprising an overexpressed endogenous DNA sequence encoding the galactose-proton symporter protein in said bacterium, in a fermentation medium under conditions suitable for the production of said L-amino acid, wherein:
 - i) said bacterium is of an Enterobacteriaceae family;
 - ii) said galactose-proton symporter protein comprises the amino acid sequence of SEQ ID NO:4 and is encoded by the nucleotide sequence of SEQ ID NO:3;
 - iii) said L-amino acid is produced from glucose, saccharose, lactose, fructose, molasses, starch, cellulose or from glycerine and ethanol;
 - iv) said overexpression is achieved by increasing the copy number of said DNA or by operably linking said DNA to a promoter; and
 - b) allowing said L-amino acid to become enriched in said bacteria or said fermentation medium.
14. (Previously presented) The process of claim 13, wherein said galactose-proton symporter protein consists of the amino acid sequence of SEQ ID NO:4.

15. (Previously presented) The process of claim 14, wherein said DNA sequence encoding the galactose-proton symporter protein consists of the nucleotide sequence of SEQ ID NO:3.
16. (Previously presented) The process of claim 13, wherein said DNA sequence encoding the galactose-proton symporter protein consists of the nucleotide sequence of SEQ ID NO:3.
17. (Previously presented) The process of claim 13, wherein overexpression is achieved by increasing the copy number of said DNA.
18. (Previously presented) The process of claim 13, wherein said L-amino acid is L-threonine.
19. (Previously presented) The process of any one of claims 13-16, further comprising isolating said L-amino acid along with some or all of the constituents of said fermentation medium and/or the biomass in said fermentation medium.
20. (Previously presented) The process of claim 19, wherein said L-amino acid is L-threonine.
21. (Currently Amended) The process of claim 13, wherein said microorganism overexpresses one or more genes selected from the group consisting of:
 - a) the thrABC operon coding for aspartate kinase, homoserine dehydrogenase, homoserine kinase and threonine synthase;
 - ~~b) the pyr gene coding for pyruvate carboxylase;~~
 - ~~e b)~~ the pps gene coding for phosphoenolpyruvate synthase;
 - ~~d e)~~ the ppc gene coding for phosphoenolpyruvate carboxylase;
 - e d) the pntA and pntB genes coding for transhydrogenase,

- f c) the *rhtB* gene which imparts homoserine resistance;
- g f) the *mgo* gene coding for malate:quinone oxidoreductase;
- h g) the *rhtC* gene which imparts threonine resistance;
- i) ~~the *thrE* gene coding for threonine export protein;~~
- j h) the *gdhA* gene coding for glutamate dehydrogenase;
- k i) the *glk* gene coding for glucokinase;
- l j) the *hns* gene coding for DNA binding protein HLP-II;
- m k) the *pgm* gene coding for phosphoglucomutase;
- n l) the *fba* gene coding for fructose biphosphate aldolase;
- o m) the *ptsH* gene coding for phosphohistidine protein hexose phosphotransferase;
- p n) the *ptsI* gene coding for enzyme I in the phosphotransferase system;
- q o) the *crr* gene coding for the glucose-specific IIA component;
- r p) the *ptsG* gene coding for the glucose-specific IIBC component;
- s q) the *lrp* gene coding for a regulator in the leucine regulon;
- t r) the *csrA* gene coding for the global regulator Csr;
- u s) the *fadR* gene coding for a regulator in the fad regulon;
- v t) the *iclR* gene coding for a regulator in central intermediary metabolism;
- w u) the *mopB* gene coding for the 10 KDa chaperone;
- x v) the *ahpC* gene coding for the small sub-unit of alkyl hydroperoxide reductase;
- y w) the *ahpF* gene coding for the large sub-unit of alkyl hydroperoxide reductase;
- z x) the *cysK* gene coding for cysteine synthase A;
- aa y) the *cysB* gene coding for the regulator in the cys regulon;
- bb z) the *cysJ* gene coding for the flavoprotein in NADPH sulfite reductase;
- ee aa) the *cysI* gene coding for haemoprotein in NADPH sulfite reductase;
- dd bb) the *cysH* gene coding for adenylylsulfate reductase;
- ee cc) the *phoB* gene coding for the positive regulator PhoB in the pho regulon;
- ff dd) the *phoR* gene coding for the sensor protein in the pho regulon;
- gg ee) the *phoE* gene coding for protein E in the outer cell membrane;
- hh ff) the *pykF* gene coding for the pyruvate kinase I stimulated by fructose;

- ~~ii~~ gg) the *pfkB* gene coding for 6-phosphofructokinase II;
- ~~jj~~ hh) the *malE* gene coding for periplasmatic binding protein in maltose transport;
- ~~kk~~ ii) the *sodA* gene coding for superoxidedismutase;
- ~~ll~~ jj) the *rseA* gene coding for a membrane protein with anti- σ E activity;
- ~~mm~~ kk) the *rseC* gene coding for a global regulator in the σ E factor;
- ~~nn~~ ll) the *sucA* gene coding for the decarboxylase sub-unit of 2-ketoglutarate dehydrogenase;
- ~~oo~~ mm) the *sucB* gene coding for the dihydrolipoyl-transsuccinase E2 subunit of 2-ketoglutarate dehydrogenase;
- ~~pp~~ nn) the *sucC* gene coding for the β -subunit of succinyl-CoA synthetase;
- ~~qq~~ oo) the *sucD* gene coding for the α -subunit in succinyl-CoA synthetase;
- ~~rr~~ pp) the *adk* gene coding for adenylate kinase;
- ~~ss~~ qq) the *hdcA* gene coding for a periplasmatic protein with a chaperonin-like function;
- ~~tt~~ rr) the *hdcB* gene coding for a periplasmatic protein with a chaperonin-like function;
- ~~uu~~ ss) the *icd* gene coding for isocitrate dehydrogenase;
- ~~vv~~ tt) the *mgIB* gene coding for periplasmatic, galactose-binding transport protein;
- ~~ww~~ uu) the *lpd* gene coding for dihydrolipoamide dehydrogenase;
- ~~xx~~ vv) the *aceE* gene coding for the E1 component of pyruvate dehydrogenase complex;
- ~~yy~~ ww) the *aceF* gene coding for the E2 component of pyruvate dehydrogenase complex;
- ~~zz~~ xx) the *pepB* gene coding for aminopeptidase B;
- ~~aaa~~ yy) the *aldH* gene coding for aldehyde dehydrogenase;
- ~~bbb~~ zz) the *bfr* gene coding for the iron storage homoprotein;
- ~~eee~~ aaa) the *udp* gene coding for uridine phosphorylase; and
- ~~ddd~~ bbb) the *rseB* gene coding for the regulator of σ E factor activity.

22. (Previously presented) The process of claim 13, wherein at least one gene in said microorganism is attenuated, said gene being selected from the group consisting of:
- a) the *tdh* gene coding for threonine dehydrogenase;
 - b) the *mdh* gene coding for malate dehydrogenase;
 - c) the gene product of the open reading frame (ORF) *yjfA*;
 - d) the gene product of the open reading frame (ORF) *ytP*;
 - e) the *pckA* gene coding for the enzyme phosphoenol-pyruvate carboxykinase;
 - f) the *poxB* gene coding for pyruvate oxidase;
 - g) the *aceA* gene coding for isocitrate lyase;
 - h) the *dgsA* gene coding for the DgsA regulator in the phosphotransferase system;
 - i) the *fruR* gene coding for fructose repressor;
 - j) the *rpoS* gene coding for the sigma³⁸-Factor;
 - k) the *aspA* gene coding for aspartate ammonium lyase; and
 - l) the *aceB* gene coding for malate synthase A gene.
23. (Currently amended) A process for the production of an L-amino acid chosen from the group consisting of L-threonine, L-isoleucine, L-valine, L-methionine, L-homoserine and L-lysine comprising:
- a) fermenting a bacterium comprising an overexpressed endogenous DNA sequence encoding the galactose-proton symporter protein in said bacterium, in a fermentation medium under conditions suitable for the production of said L-amino acid, wherein:
 - i) said bacterium is of an Enterobacteriaceae family and transports glucose by ~~a~~ the PEP-dependent phosphotransferase (PTS) pathway;
 - ii) said galactose-proton symporter protein comprises the amino acid sequence of SEQ ID NO:4;
 - iii) said L-amino acid is produced from glucose, saccharose, lactose, fructose, molasses, starch, cellulose or from glycerine and ethanol;

- iv) said overexpression is achieved by increasing the copy number of said DNA or by operably linking said DNA to a promoter; and
 - b) allowing said L-amino acid to become enriched in said bacteria or said fermentation medium.
- 24. (Previously presented) The process of claim 23, further comprising isolating said L-amino acid along with some or all of the constituents of said fermentation medium and/or the biomass in said fermentation medium.
- 25. (Currently amended) The process of claim ~~24~~ 13, wherein said bacterium is selected from the group consisting of: Escherichia coli H4581; Escherichia coli VNIIGenetika MG442; Escherichia coli VNIIGenetika M1; Escherichia coli VNIIGenetika 472T23; Escherichia coli BKIIM B-3996; Escherichia coli kat 13; and Escherichia coli KCCM-10132.
- 26. (Previously presented) The process of claim 25, wherein said L-amino acid is L-threonine.